Revista Información Científica

ISSN 1028-9933
Universidad de Ciencias Médicas de Guantánamo

Volume 102 Year 2023
DOI:10.5281/zenodo.7823699

ORIGINAL ARTICLE

Use of *Petiveria alliacea Linn* as palliative treatment of pulpal pain

Uso de *Petiveria alliacea Linn* como tratamiento paliativo del dolor pulpar

Uso de *PetiveriaalliaceaLinn* como tratamento paliativo da dor pulpar

Laura Yanet Pita-Labori[I]*, DaniaMavis Matos-Cantillo[I], Carina María Quintero-Lores[I], Yunia Castillo-Pérez[I], Ana MaríaNicó-Navarro[I]

[I] Universidad de Ciencias Médicas de Guantánamo. Filial de Ciencias Médicas Baracoa. Guantánamo, Cuba.

***Corresponding author:** laura.gtm@infomed.sld.cu

Received: 05-01-2023 **Accepted:** 07-03-2023 **Published:** 13-04-2023

ABSTRACT

Introduction: among the Cuban flora plants with medicinal properties is *Petiveria alliacea Linn* (anamú), a natural plant from tropical Americas that contains numerous active ingredients and to which multiple properties are attributed. The vast majority of reports refer specifically to its analgesic action, coming from its leaves and roots. **Objective:** to evaluate the therapeutic effect of 20% anamú tincture on the remission of pulpal pain in reversible serous acute pulpitis, during the period from September 2020 to September 2021. **Method:** a quasi-experimental study was carried out in patients with pain from the stomatological emergency room of the Policlínico Comunitario "Hermanos Martínez Tamayo". The population was made up of all the patients who attended the consultation for pain (No. 42) and were diagnosed with reversible serous acute pulpitis. They were included in the study using the intentional non-probabilistic method according to the order of reception in the dental office. The variables taken into account were: age, pain refraction time and therapeutic effect. The statistical processing of the data was carried out using descriptive statistics and the percentage was used as a summary measure. **Results:** in 64.3% of the cases studied, pain remission could be achieved in the first 5 minutes of applying the phytopharmaceutical. **Conclusion:** the tincture of *Petiveria alliacea Linn* (anamu) at 20% has a favorable effect on the remission of pain caused by reversible serous acute pulpitis.

Keywords: *Petiveria alliacea Linn*; anamú; pain; reversible pulpitis; natural and traditional medicine

RESUMEN

Introducción: entre las plantas de la flora cubana con propiedades medicinales se encuentra la *Petiveria alliacea Linn* (anamú), planta natural de la América tropical que contiene numerosos principios activos y a la cual se le atribuyen múltiples propiedades. La gran mayoría de los reportes se refieren concretamente a su acción analgésica, proveniente de sus hojas y de sus raíces. **Objetivo:** evaluar el efecto terapéutico de la tintura de anamú al 20 % en la remisión del dolor pulpar en la pulpitis aguda serosa transitoria, durante el periodo de septiembre de 2020 a septiembre de 2021. **Método:** se realizó un estudio de tipo cuasi-experimental en pacientes con dolor de la consulta de urgencia estomatológica del Policlínico Comunitario "Hermanos Martínez Tamayo". El universo estuvo constituido por todos los pacientes que acudieron a consulta por dolor (N=42) y le fue diagnosticado pulpitis aguda serosa transitoria. Los mismos fueron incluidos en el estudio mediante el método no probabilístico intencionado según el orden de recepción en la consulta estomatológica. Se trabajó con las variables: edad, tiempo de refracción del dolor y efecto terapéutico. El procesamiento estadístico de los datos se realizó mediante estadística descriptiva y como medida de resumen se utilizó el porcentaje. **Resultados:** en el 64,3 % de los casos estudiados se pudo lograr la remisión del dolor en los primeros 5 minutos de aplicado el fitofármaco. **Conclusión:** la tintura de la *Petiveria alliacea Linn* (anamú) al 20 % tiene un efecto favorable en la remisión del dolor provocado por la pulpitis aguda serosa transitoria.

Palabras clave: *Petiveria alliacea Linn*; anamú; dolor; pulpitis reversible; medicina natural y tradicional

RESUMO

Introdução: entre as plantas da flora cubana com propriedades medicinais está a *Petiveria alliacea Linn* (anamú), uma planta natural da América tropical que contém numerosos princípios ativos e à qual são atribuídas múltiplas propriedades. A grande maioria dos relatos refere-se especificamente à sua ação analgésica, proveniente de suas folhas e raízes. **Objetivo:** avaliar o efeito terapêutico da tintura de anamú 20% na remissão da dor pulpar na pulpite serosa aguda transitória, durante o período de setembro de 2020 a setembro de 2021. **Método:** foi realizado um estudo quase experimental em pacientes com dor de pronto-socorro estomatológico da Policlínico Comunitario "Hermanos Martínez Tamayo". O universo foi constituído por todos os doentes que compareceram à consulta de dor (N=42) e foram diagnosticados com pulpite serosa aguda transitória. Eles foram incluídos no estudo pelo método não probabilístico intencional de acordo com a ordem de recepção no consultório odontológico. Trabalhamos com as variáveis: idade, tempo de refração da dor e efeito terapêutico. O tratamento estatístico dos dados foi realizado por meio de estatística descritiva e o percentual foi utilizado como medida sumária. **Resultados:** em 64,3% dos casos estudados, a remissão da dor foi alcançada nos primeiros 5 minutos de aplicação do fitofármaco. **Conclusão:** a tintura de *Petiveria alliacea Linn* (anamu) a 20% tem efeito favorável na remissão da dor causada pela pulpite serosa aguda transitória.

Palavras-chave:*Petiveria alliacea Linn*; anamú; dor; pulpite reversível; medicina natural e tradicional

How to cite this article:
Pita-Labori LY, Matos-Cantillo DM, Quintero-Lores CM, Castillo-Pérez Y, Nicó-Navarro AM. Use of *Petiveria alliacea Linn* as palliative treatment of pulpal pain. Rev Inf Cient. 2023; 102:4101. DOI: https://doi.org/10.5281/zenodo.7823699

INTRODUCTION

The World Health Organization (WHO) defines Traditional Natural Medicine (TNM) as the total sum of knowledge, skills and practices based on the theories, beliefs and experiences of different cultures, whether applicable or not, used to maintain health and prevent, diagnose, improve or treat physical and mental illnesses.[1] Its development has not been limited to the accumulation of knowledge derived from practice, but also to the design of a complete theoretical body on the art of healing, integrated into modern health systems, which has led the governments of several countries to take responsibility for drafting legislations in this regard.[2]

Among the modalities of MNT is phytotherapy, which is the oldest form of medical care known to mankind.[3] In Cuba, verbal antecedents of this millenary practice date back to aboriginal times.[4] Thus, a tradition of its own has been formed in the use of medicinal plants, which reached its maximum expression in the 40s of the last century in the person of Juan Tomás Roig Mesa (1944), illustrious scholar, botanist, pharmacist and agronomist, who conducted a very important research on the healing properties of Cuban plants and published the result of his research in his extraordinary work in two volumes entitled Medicinal, Aromatic and Poisonous Plants of Cuba.[5]

Among the plants with medicinal properties in the Cuban flora is *Petiveria alliacea Linn* (anamú), a plant native to tropical America, specifically the Amazon rainforest and the tropical areas of Central and South America and the Caribbean.[6] This plant contains numerous active principles (flavonoids, benzoic acid, triterpenes, beta-sitosterol, coumarin, steroids, tannins, isoarborinol, senfol, etc.).[7]

Many properties are attributed to anamú, but the vast majority of reports refer specifically to its analgesic action, coming from its leaves and roots, the latter with a greater potential for this therapeutic property.[8] The leaves of anamú contain polyphenols, which have been described as having an inhibitory effect on cyclooxygenase-1 (COX-1), and COX-1 inhibitory substances are recognized as anti-inflammatory and for their effect on pain.[9]

Pain is one of the most frequent reasons for consultation in the medical and stomatological clinics. In primary care, the stomatologist is confronted almost daily with patients suffering from some type of pain, generated in most cases from dental structures.[10]

There are several diseases that lead patients to seek professional help; the vast majority corresponds to pulpal and periapical inflammatory states or processes due to the painful symptomatology that characterizes them; among them is serous pulpitis.

Transient acute serous pulpitis is a broad inflammatory state of the dental pulp in which chronic inflammatory cells are detected in the tissue, but not in sufficient magnitude to consider the existence of exudate.[11] The inflamed pulp retains the ability to repair itself once the irritant factor that triggers the inflammatory process is eliminated.

The diagnosis of this pathology is clinical, determined by the characteristics of the pain obtained during the anamnesis; and gathering evidence of caries, defective fillings, sequelae of dental trauma, operative treatments performed, abrasion or attrition, periodontal disease, occlusal dysfunction and bruxism, all of them obtained during the clinical examination.[12]

Pain is transient, mild to moderate, provoked by thermal changes and other stimuli, and can sometimes be spontaneous, although not continuous. It does not subside immediately after cessation of the triggering stimulus and disappears with analgesics.

To date, dental caries has been the most frequent etiological factor in the incidence of pulpal inflammatory conditions, since it continues to be the most widespread disease in humans, with an average prevalence of 90%.[11]

Stomatology uses very expensive medications in its treatments, since the most important ones are imported from an international market, which prices exceed the purchasing possibilities of underdeveloped countries, which forces to research and search for solutions for the substitution of medications by other affordable options. Therefore, this research aims to evaluate the therapeutic effect of *Petiveria alliacea Linn* (anamú) tincture at 20% in the remission of pulp pain caused by acute transient serous pulpitis, during the period from September 2020 to September 2021.

METHOD

A quasi-experimental study was carried out in patients who attended the Stomatological Emergency consultation of the Policínico Comunitario "Hermanos Martínez Tamayo", with pain resulting from acute serous transient pulpitis, during the period from September 2020 to June 2021.

The study universe consisted of 42 patients, who were included in the study by means of the non-probabilistic method, following the order of reception in the stomatological consultation. Patients with mental limitations, pregnant women and patients with anticoagulant treatment were excluded from the study.

We worked with the following variables: age, pain refraction time and therapeutic effect. The biological age present at the time of the study and the time in minutes in which pain relief was achieved once the tincture was applied were taken into account.

Procedure: After the elimination of the triggering cause of acute transient serous pulpitis, absorbent cotton soaked in 20% anamú tincture was placed in the cavity of the affected tooth. This tincture was elaborated from the leaves of the plant in the local production laboratory corresponding to the Community Pharmacy "La Pasada". The application was carried out until remission of the painful symptoms was achieved, and then the cavity was sealed with zinc oxide and eugenol for 48 hours.

The data obtained were entered into a data entry form as a source for processing and analysis. The statistical processing of the data was carried out by means of descriptive statistics and the percentage was used as a summary measure.

The principles of Bioethics and Medical Ethics: beneficence, non-maleficence, justice and autonomy were taken into account in the research. The patients were given a detailed explanation of the objectives of the research, its characteristics, as well as its benefits. They were guaranteed the confidentiality of the data, which were used by the authors only for research purposes.

RESULTS

Table 1 shows that those aged between 21 and 40 years were the most affected by transient acute serous pulpitis.

Table 1. Patients diagnosed with transient acute serous pulpitis according to age.

Age group (years)	No.	%
- 20	7	16.6
21 - 30	11	26.1
31 - 40	12	28.5
41 - 50	6	14.2
51 - 60	3	7.1
61 +	3	7.1
Total	**42**	**100.0**

Source: Emptying spreadsheet.

In 64.3% of the cases the pain remitted in the first 5 minutes, 23.8% did so in a period of time greater than 5 and less than 10 minutes, and only in 11.9% the pain remission was achieved after 10 minutes or more, without exceeding 5 minutes, as shown in Table 2.

Table 2. Patients with a diagnosis of acute transient serous pulpitis according to age and pain refraction time when applying 20% anamú tincture.

Age group (years)	Refraction time of pain						Total	
	≤ 5 min		> 5 y < 10 min		≥ 10 min			
	No.	%	No.	%	No.	%	No.	%
- 20	6	14.3	1	2.4	-	-	7	16.7
21-30	7	16.7	3	7.1	1	2.4	11	26.1
31-40	6	14.3	4	9.5	2	4.8	12	28.5
41-50	3	7.1	2	4.7	1	2.4	6	14.3
51-60	3	7.1	-	-	-	-	3	7.1
61 +	2	4.8	-	-	1	2.4	3	7.1
Total	**27**	**64.3**	**10**	**23.8**	**5**	**11.9**	**42**	**100.0**

Source: Emptying spreadsheet.

Table 3 shows that the therapeutic effect obtained was evaluated as favorable in 64.3% of the patients and moderately favorable in the remaining 35.7%. In 100% of the cases, relief of pain caused by transient acute serous pulpitis was achieved.

Table 3. Patients diagnosed with transient acute serous pulpitis according to age and therapeutic effect of 20% anamú tincture in the remission of pulp pain.

Age group (years)	Therapeutic effect						Total	
	Favorable		Moderately favorable		Not Favorable			
	No.	%	No.	%	No.	%	No.	%
-20	6	14.3	1	2.4	-	-	7	16.7
21-30	7	16.7	4	9.5	-	-	11	26.2
31-40	6	14.3	6	14.3	-	-	12	28.6
41-50	3	7.1	3	7.1	-	-	6	14.3
51-60	3	7.1	-	-	-	-	3	7.1
61 +	2	4.8	1	2.4	-	-	3	7.1
Total	**27**	**64.3**	**15**	**35.7**	**-**	**-**	**42**	**100.0**

Source: Emptying spreadsheet.

DISCUSSION

This result is similar to a study carried out by the author in 2017 on the most frequent pulpal inflammatory conditions, highlighting the ages between 25 to 34 and 35 to 44 years as the most affected (60%) by reversible pulpal inflammatory conditions.[10]

Similarly, the results achieved by the author Núñez Gudás in her study Comportamiento de algunas enfermedades pulpares como urgencias en pacientes de 15 y más años, reveal a predominance of the age group 19 to 34 years.[11]

As can be seen, the cited authors agree that these inflammatory conditions occur more frequently in young teeth. Pulp tissue and the cavity that houses it undergo structural and functional variations in relation to age.[12] These changes cause a decrease in the biological response capacity and, as a consequence, the aged pulp tissue does not respond to external stimuli as a young pulp does.[13]

Secondary dentin forms gradually as the functional stresses on the tooth increase. It is estimated that in humans, 4 um of secondary dentin is deposited daily, which progressively decreases the volume of the pulp. The quantity and quality of tertiary dentin formed is related to the duration and intensity of the stimulus. If the tertiary dentin forms rapidly, odontoblasts may remain included.[14]

A decrease in the number of these sensitive cells will, in turn, decrease the responsiveness of the pulp to the action of local irritants or selected therapeutics.

There are studies that indicate that the density of dentinal tubules varies from 40,000 to 70,000 tubules per mm^2, and others affirm that dentinal tubules occupy 20 to 30% of the total volume of intact dentin.[14] The existence of dentinal tubules determines that dentin is very permeable in young teeth, which is why they constitute a rapid entry route for microorganisms from caries, to which the pulp responds by becoming inflamed. In the dentin of young teeth, where the apex has not finished forming, the tubules are wider and more permeable, which facilitates even more the filtration of bacteria or their toxins.[15]

Peritubular dentin is deposited centripetally in relation to the dentinal tubule, slowly and gradually, and with age, it can partially or totally obliterate the dentinal tubules, which causes a decrease in the permeability of the dentin and therefore limits the diffusion of harmful substances through it, such as bacterial products, which helps to protect the pulp from irritation.[15]

With partial or total obliteration of the dentinal tubules, numerous odontoblastic extensions are lost, which in the vicinity of the amelodentinal border act as real receptors of physical and chemical stimuli.

Over the years, the dental pulp also undergoes important changes that modify its response capacity.[13] There is a gradual decrease in the cellular population, which is reduced to half in adult pulps. There is a progressive transformation of the lax connective tissue of the pulp into semi-dense connective tissue, due to an increase in collagen fibers and a consequent decrease in the amorphous ground substance.[14]

Some authors have described the replacement of normal pulp elements by fatty components as a change associated with the passage of time. In aged pulps, it has been possible to isolate monoglycerides, diglycerides, phospholipids, lipoproteins, cholesterol and cholesteryl esters, which are substances that calcify and can lead to the formation of denticles.[13]

The fact is that with the substitution of the cellular component of the pulp by fibrous or calcified tissue, the sensitive, reparative and defense functions of the pulp are diminished.

It is also suggested that in aged pulps, there is a gradual decrease in irrigation and innervation as a result of the reduction of the volume of the pulp organ. Obliteration of blood vessels occurs in these pulps.[14] With the passage of time, the apposition of dentin and cementum at the apex increases, which tends to narrow the original apical foramen.[13] Since the blood, lymphatic and nerve supply penetrates the pulp through this foramen, it is logical to think that with age this supply is compromised. In extremely aged teeth, it is possible that the apposition of dentin and cementum may completely close off the entrance of this supply.[15]

Over time, the pulpal nerves become less sensitive, which explains why aged teeth often do not experience pain.[13] With the decrease of all pulpal, circulatory and nerve elements, eventually only fibrous tissue remains in the pulp. This stage is known as pulp fibrosis, senile fibrosis, atrophic pulp, pulposis or senile pulp atrophy. In this state, the pulp may show a diminished response to vitality tests while still functioning normally.[14]

Knowledge of all these changes is of great clinical importance, since the defense capacity in a young pulp is greater because it has a higher number of elements, capable of neoformation of odontoblasts.

The capacity of self-defense or the possibility of tissue regeneration depends not only on the biological age, but also on the general state of health of the organism, the amount of trauma exerted on the pulp and the amount of tissue damage, so it can be said that there are biologically old pulps in chronologically young individuals.[15]

The anamú plant has long been used traditionally to relieve pain and reduce inflammation. According to research conducted by the Chinese Journal of Integrative Medicine, anamú reduces markers of inflammation such as interleukin 6, prostaglandin E2 and tumor necrosis factor alpha.[9]

Gupta (1995); Germosén-Robineau (1995); Furones, *et al.* (1996), Cáceres, *et al.* (1998); Martins, *et al.* (2000); Coelho, *et al.* (2001); Rösner, *et al.* (2001); Ruffa, *et al.* (2002); Bezerra, *et al.* (2005) make reference in their research to the analgesic effect of anamú.[16]

A research group in Sweden reported that anamú leaves contain polyphenols, which have been described to have a cyclooxygenase-1 (COX-1) inhibitory effect. COX-1 inhibitory substances are recognized for their pain-relieving and anti-inflammatory effects.[17]

Phytomedicine: International Journal of Phytotherapy & Phytopharmacology found that anamú can significantly alleviate pain.[18]

Phytochemical studies of *Petiveria alliacea Linn* (anamú), indicate that this plant contains a diversity of biologically active compounds, with qualitative and quantitative variations of the major compounds according to the region of collection and the harvesting season, such as essential oil (Petiverunt), saponin glycosides, isoarborinol-triterpene, isoarborinol-acetate, isoarborinol-cinnamate, steroids, alkaloids, flavonoids and tannins.

While chemical analyses of the root have revealed coumarins, benzyl-hydroxy-ethyl-trisulfide, benzaldehyde, benzoic acid, dibenzyl trisulfide, potassium nitrate, β-sitosterol, isoarborinol, isoarborinol-acetate, isoarborinol-cinnamate, polyphenols, trithiolaniacin, glucose, and glycine.[9]

Other studies have shown that anamú significantly suppresses the secretion of prostaglandin E2, leukotriene C4, interleukin (IL)-1 β, IL-6, IL-10, interferon gamma nitric oxide (NO), inducible NO synthase, IL-1 β, I -4, in RAW264.7 cells in a dose-dependent way.[7]

The difference is established in the time in which pain relief is achieved, which may be given precisely by the morphofunctional changes that the pulp undergoes as it ages or to the degree of retraction of this and the pulp chamber, product of the time exposure to irritants and intensity of the action of these.

The decreased nerve supply of the pulp, the increased volume of dentin, the sclerosis of the dentinal tubules and other changes in the content of the ground substance and collagen tend to make the pulp less sensitive to stimuli; in this case, to the chemical principles with anti-inflammatory and analgesic action identified in the anamú plant.

CONCLUSIONS

According to the results obtained in the research, it can be concluded that the tincture of *Petiveria alliacea Linn* (anamú) at 20% has a favorable effect in the remission of the painful condition caused by acute transient serous pulpitis.

REFERENCES

1. Gámez Matos DL, Pita Labori LY., Thomas Ferrer F, Matos Cantillo DM, Laffita Abad Y. Extracción dentaria con analgesia acupuntural. Rev Inf Cient [Internet]. 2018 [cited 18 Feb 2022]; 97(Suppl 1):[approximately 8 p.]. Available in: https://revinfcientifica.sld.cu/index.php/ric/article/view/1864
2. RhaeCisneros A, García Milian AJ. La medicina Natural y tradicional en Cuba logros y desafíos. INFODIR [Internet]. 2018 [cited 18 Feb 2022]; (28):[approximately 2 p.] Available in: http://revinfodir.sld.cu/index.php/infodir/article/view/503
3. Pita Labori LY, Matos Cantillo DM. Beneficios, contraindicaciones y precauciones de la Medicina Natural y Tradicional como respuesta a los problemas de salud estomatológicos. Rev Inf Cient [Internet]. 2018 [cited 18 Feb 2022]. 96(2):[approximately 9 p.] Available in: https://revinfcientifica.sld.cu/index.php/ric/article/view/17/1034
4. Morejón Barroso O, Varela Castro L. Medicina natural y tradicional, breve historia e integración en Cienfuegos. Medisur [Internet]. 2020 [cited 18 Feb 2022]; 18(1):7-9. Available in: http://medisur.sld.cu/index.php/medisur/article/view/4448/3053
5. Regalado Veloz AI, Sánchez Perera LM. Plantas cubanas con efecto antiinflamatorio. Rev Cubana Farm [Internet]. 2018 Mar [cited 18 Feb 2022]; 49(1):[approximately 8 p.]. Available in: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S0034-75152015000100015
6. Moreno Montoya A, Cañada Rodríguez A, Antúnez Coca J, Díaz Montes de Oca CI, Pineda AM. Uso de la fitoterapia en 3 clínicas estomatológicas de Santiago de Cuba. MEDISAN [Internet]. 2019 Abr [cited 22 Feb 2022]; 15(4):[approximately 9 p.] Available in: http://bvs.sld.cu/revistas/san/vol_15_4_11/san13411.htm
7. Andarcia D. Anamú, propiedades y contraindicaciones. mejorconsalud.as.com. [actualized 2021; cited 22 Feb 2022]. Available in: https://mejorconsalud.as.com/anamu-propiedades-contraindicaciones/
8. Anamú: Propiedades medicinales, beneficios y efectos secundarios. Plantas Medicinales. [Internet] 2019 Abr [cited 22 Feb 2022].

Available in: https://plantasmedicinales.info/anamu/
9. Anamú: propiedades y contraindicaciones. mejorconsalud.as.com. España: [actualized 25 Jan 2022; cited 9 Mar 2022]. Available in: https://mejorconsalud.as.com/anamu-propiedades-contraindicaciones/
10. Pita Labori LY, Matos Cantillo DM, Tabera García ME, Martínez Paumier A, Morejón Correa D. Estados inflamatorios pulpares más frecuentes en servicios de urgencia. Rev Inf Cient [Internet]. 2017 [cited 9 Mar 2022]; 96(4):[approximately 9p]. Available in https://revinfcientifica.sld.cu/index.php/ric/article/view/1184
11. Viltres-Pedraza G, Cuevas-Gandaria M. Comportamiento de algunas enfermedades pulpares como urgencias en pacientes de 15 y más años. MULTIMED [Internet]. 2017 [cited 9 Mar 2022]; 17(4):[approximately 8 p.]. Available in: https://revmultimed.sld.cu/index.php/mtm/article/view/326
12. Durango Quiñones EM, Tovar Navarro KM, Parra Luna MC. Prevalencia de patologías pulpares y periapicales en pacientes atendidos durante el segundo semestre de 2019 en la Clínica Guane de Floridablanca [Tesis Endodoncia]. Bucaramanga, Colombia: Universidad Santo Tomás, Facultad de Odontología; 2021. [cited 22 Mar 2022]. Available in: https://repository.usta.edu.co/handle/11634/38819
13. Miquet VSA, Báez AÉ. Células madre dentales, reparación y regeneración en pulpa. Rev 16 de Abril [Internet] 2019 [cited 22 Mar 2022]; 58(274):126-130. Available in: https://www.medigraphic.com/cgi-bin/new/resumen.cgi?IDARTICULO=95251
14. Torrecilla-Venegas R, Castro-Gutiérrez I. Efectos del envejecimiento en la cavidad bucal. Rev 16 de Abril [Internet] 2020 [cited 22 Mar 2022]; 59(278):[approximately 5 p]. Available in: https://www.medigraphic.com/cgi-bin/new/resumen.cgi?IDARTICULO=97926b
15. Boiero CF, Gani Omar A. Análisis de las modificaciones histológicas en la vascularidad de la pulpa dental humana durante su diferenciación, maduración y envejecimiento. Canal Abierto [Internet]. 2018 [cited 22 Mar 2022]; 38(Oct): [approximately 6 p.]. Available in: https://rdu.unc.edu.ar/handle/11086/29860
16. Ministerio de la Protección Social. Vademecum colombiano de plantas medicinales [Internet]. Ministerio de la Protección Social: Colombia; 2008. [cited 22 Mar 2022]. Available in: https://www.minsalud.gov.co/sites/rid/Lists/BibliotecaDigital/RIDE/VS/PP/SA/vademecum-colombiano-plantas-medicinales.pdf
17. Illnait Ferrer J. Principales referencias etnomedicas sobre el anamú (petiveria alliacea linn) y principios activos encontrados en la planta. Un acercamiento al tema. Rev CENIC: Ciencias Biológicas [Internet]. 2007 Jan [cited 22 Mar 2022]; 38(1):27. Available in: https://go.gale.com/ps/i.do?id=GALE%7CA308130639&sid=googleScholar&v=2.1&it=r&linkaccess=abs&issn=02586002&p=IFME&sw=w&userGroupName=anon%7Eda518722
18. Lopes-Martins RA, Pegoraro DH, Woisky R, Penna SC, Sertié JA. The anti-inflammatory and analgesic effects of a crude extract of Petiveria alliacea L. (Phytolaccaceae). Phytomedicine [Internet]. 2002 [cited 22 Mar 2022]; 9(3):245-248. DOI: https://doi.org/10.1078/0944-7113-00118

Conflict of interest:
The authors declare that they have no conflict of interest.

Author contributions:
Conceptualization: Laura Yanet Pita-Labori.
Data curation: Laura Yanet Pita-Labori, Dania Mavis Matos-Cantillo.
Formal analysis: Laura Yanet Pita-Labori, Dania Mavis Matos-Cantillo.
Investigation: Laura Yanet Pita-Labori, Dania Mavis Matos-Cantillo, Yunia Castillo-Pérez.
Methodology: Laura Yanet Pita-Labori, Dania Mavis Matos-Cantillo, Yunia Castillo-Pérez.
Project administration: Laura Yanet Pita-Labori, Dania Mavis Matos-Cantillo.
Resources: Laura Yanet Pita-Labori, Dania Mavis Matos-Cantillo.
Supervision: Laura Yanet Pita-Labori, Dania Mavis Matos-Cantillo, Yunia Castillo-Pérez, Carina María Quintero-Lores.
Validation: Laura Yanet Pita-Labori, Yunia Castillo-Pérez, Carina María Quintero-Lores.
Visualization: Ana María Nicó-Navarro.
Writing-original draft: Laura Yanet Pita-Labori, Carina María Quintero-Lores, Ana María Nicó-Navarro.
Writing-revision and editing: Laura Yanet Pita-Labori, Dania Mavis Matos-Cantillo, Carina María Quintero-Lores, Yunia Castillo-Pérez, Ana María Nicó-Navarro.

Funding:
The authors did not receive funding for the development of the present research.

Complementary file (Open Data):
Base de datos de Uso de *Petiveria alliacea Linn* como tratamiento paliativo del dolor pulpar (Database of Use of Petiveria alliacea Linn as palliative treatment of pulp pain)